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ABSTRACT

This paper reviews the development of attribution theory as it relates to sport from Fritz Heider's original model of attribution theory in 1958 to the present. The original model explains that individuals use four attribution factors to interpret and predict the outcome of an event--ability, effort, task difficulty, and luck. Bernard Weiner built upon Heider's basic theory by organizing the four attribution factors into two dimensions: locus of control (internal vs. external) and stability (fixed vs. variable). A more recent model includes the role of emotional reactions and expectations of future performances. Other factors which are seen to affect performance outcome attribution include skill level effects and the syndrome of learned helplessness (when the probability of a desired outcome is perceived as not increased by one's actions). Methodological issues concerning research on attribution theory include a failure of early measures to consider all possible causal attributions and the arbitrary assigning of causal variables. New measures attempt to address these methodological problems. (Contains 15 references.) (JB)

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Attribution Theory in Sport: Problems and Solutions

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In a sport-specific situation, people often strive to determine the cause of their own and other people's success and failure or winning and losing. This process of speculation and interpretation can be explained by the process of attribution. Attribution theory, pioneered by Fritz Heider, is concerned with causal inferences, or the perceived reasons why a particular event occurred. Heider (1944), proposed that every person intends to explain his or her actions in terms of perceived causes. This simplistic theory was considered to be one of naive or common sense psychology.

Bernard Weiner (1972, 1985) expanded upon Heider's naive analysis of action model to propose that perceived attributions of a particular outcome can greatly affect an individual's future actions, confidence and expectancies about performance. Such approaches to attribution theory also included areas of stability, locus of control, locus of causality, skill levels of athletes, and learn helplessness (Anshal, 1994). Recently, Russell (1982) and McCauley, Duncan, and Russell (1992) have contributed significantly to the body of research accumulated on the topic by developing more sophisticated scales to measure causal attributions.

FRITZ HEIDER'S ORIGINAL MODEL

Fritz Heider, the founder of attribution theory, proposed that people strive for prediction and understanding of daily events in order to give their lives stability and predictability (Heider, 1958). In an achievement-related event such as an athletic contest, individuals use four attribution factors both to interpret and predict the outcome of the event. The four causal elements are ability, effort, task difficulty, and luck. Outcomes can either be attributed internally using the attributions of task difficulty and/or luck (Arkes & Garske, 1982).

In attempting to explain the prior outcome of success or failure of an athletic event, the individual assesses their own or the performer's ability level, the amount of effort that was expanded, the difficulty of the task, and the magnitude of luck. According to Heider, the external and internal forces are added together to result in a behavioral outcome to which an attribution cause is ascribed (Harvey, 1978).

BERNARD WEINER: LOCUS OF CONTROL AND STABILITY

Weiner built upon Heider's basic theory by organizing the four attribution factors into two basic dimensions: locus of control (internal vs. external) and stability (fixed vs. variable). Weiner considered individuals with an internal locus of control to possess the belief that their behaviors can influence outcomes while individuals with an external locus of control tend to believe that outcomes are controlled by environmental factors. The four factors are now labeled as followed: ability (internal/stable), effort (internal/unstable), task difficulty (external/unstable), and luck (external/unstable) (Harvey & Weary, 1985).

In the case of a sporting event, an athlete would ascribe the cause of the outcome to one or more of these attribution factors. For example, in the case of a horse show, if the rider rode very well and did not receive a good ribbon, the individual may then attribute this unfortunate outcome to bad luck because the judge overlooked him or her, or perhaps did not like that individual's particular riding style even if it was correct.

More recently, Weiner added a third attribution dimension, control. Therefore, attributions can be categorized as either under the athlete's control or not. Unfortunately, it is impossible to classify causes as external and controllable, therefore the controllability factor is limited to only the internal locus of control dimension (Harvey & Weary, 1985). Weiner also made the two similar dimensions of locus of control and controllability more distinct by renaming the locus of control dimension the locus of causality (Harvey & Weary, 1985).

This recent model includes the role of emotional reactions and future performance expectations that may occur. Following an achievement outcome, such as an athletic contest or game, the athlete experiences an affective reaction which Weiner labels "outcome-dependent affects" (Weiner, Russell & Lerman, 1979). These affects include positive and negative feelings regarding oneself in times of success and failure (Weiner, Russell & Lerman, 1979). For example if a person perceives that he or she was successful or unsuccessful in a sporting event, they will feel good or bad about themselves and attempt to explain this outcome in terms of the causal attributions. In turn, this combination of both the

emotional reaction and the achievement outcome may influence future behavior.

Both a positive emotional reaction and a successful outcome may generate a stronger expectancy of success in the future which may, in turn, increase the likelihood of a successful effort and outcome. On the other hand, if a person experiences consistent failure and negative emotional reactions then they may be less willing to participate in this particular sporting event in the future. (Weiner, 1985; Anshal, 1994). Researchers have found all three causal dimensions to be related to emotions in sport (McAuley & Duncan, 1990; McAuley, Russell & Gross, 1983).

SKILL LEVEL EFFECTS

Performance outcomes may be attributed to differing causal labels according to the skill level of the athlete. In general, skilled athletes see themselves as having high levels of ability which explains why McAuley and Gross (1983) found that skilled, consistently successful athletes tend to attribute their successes to stable, internal causes.

In the case of a usually successful athlete who at one time experiences failure, he or she may tend to ascribe the failure to an unstable, external source such as a tough opponent (Brawley and Roberts, 1984).

Explanations of this type tend to protect the skilled athlete's self-esteem and confidence in their ability. Brawley and Roberts (1984) term for this phenomena is the "self-serving attribution bias".

Frieze and Weiner (1972) investigated the matter of the self serving attribution bias with a series of task performances. When a particular outcome of a task performance agreed with past outcomes, the subjects tended to ascribe this result to stable attributions such as ability and task difficulty regardless of whether the subject consistently failed or succeeded. Similarly, when a particular task performance outcome conflicted with previous outcomes, the subject was more likely to ascribe this result to unstable factors such as luck and effort (Frieze and Weiner, 1971).

LEARNED HELPLESSNESS

Learned Helplessness is a syndrome of cognitive and motivational deficits that occurs when the probability of a desired outcome is perceived as not increased by one's actions (Pervin, 1990). Related to sport situation, the condition of learned helplessness may occur when an athlete attributes a series of failures to a lack of ability. In this case, a drop in the individual's perception of their ability is considered maladaptive and difficult to reconstruct. More often than not, the result is the condition of learned helplessness. On the other hand, ascriptions of failure that are external, unstable, and specific are considered adaptive because the athlete recognizes that he or she does have a strong degree of control over their environmental outcomes yet once in a while, failure may be the result of an unstable cause such as degree of effort (Pervin, 1990). For example, the athlete may believe that if they try harder next time, there will be a more favorable outcome.

The differences in the perceptions of failures and successes by individuals which influences helplessness was investigated by Dweck and Reppucci (1973). According to their research, at least one of four features must be present. First, the individual must have a history of past successes and failures. Second, feedback from an outside source (such as a coach or parent) must be analyzed to determine whether or not it was delivered in a way which emphasized positive, negative, internal, external, stable or unstable causes of the performance. Third, the amount of this feedback is significant because frequent feedback is more likely to be accepted by the individual. Finally, the source of this feedback must also be considered to determine whether or not the individual regards the source as credible or not because feedback from credible sources is more likely to be believed by the individual (Dweck & Reppucci, 1973)

Methodological Issues: Problems and Solutions

Unfortunately, much of the research in the past on attribution theory was done with very unsophisticated scales of measurement because the majority of the early research was based on Weiner's (1972) early model which included only the four causal attribution

elements. Therefore, the response an athlete may make about their actions and outcomes is restricted to only four answers. This limited perspective of the attribution process resulted in many research weaknesses even after Weiner's (1985) revision of the two-dimensional model because it is possible that even his reformulated model does not consider all possible causal attributions.

The most significant flaw in attribution research has been the "failure to consider the respondent's perception of the link between specific causal attributions and their corresponding causal dimensions, a perception that may be radically different from that of the investigator" (McAuley & Gross, 1983). The arbitrary assigning of causal variables is always a possibility because it cannot be assumed that researchers can always accurately predict how the subject perceives an attribution in terms of its causes (McAuley & Gross, 1983).

To deal with these methodological problems, Russell (1982) developed the Causal Dimension Scale (CDS), a measure of how individuals perceive attribution causes. Athletes can indicate a particular cause for an outcome and then rate the cause on a scale composed of questions which can be related to the three dimensions of causality: locus of control, stability, and controllability. As a result, there are eight possible categories of attributions which allows for a more accurate assessment of attribution causes (Russell, 1982). An even more recent measurement of causal attributions was developed in 1992 when McAuley, Duncan, and Russell revised the old CDS to create the CDSII. Unlike the old three-dimensional scale, the CDSII is a four dimensional scale: locus of control, stability, personal control and external control. This new scale helps distinguish between outcomes caused by the individual and outcomes caused by other people thereby creating an even more accurate attribution research device (McAuley, 1992).

Conclusions and Future Directions

Although research on the subject of causal attribution in sport has become more complex since the days of Heider and Weiner, their original hypotheses should not be ignored. Rather, research should look at their elements more closely to discover which causal elements apply most often to what sport situations. Athletes will

always be looking to improve their performance and will hopefully be more accepting of psychological help in the world of sport. Therefore, there will always be a demand for new and helpful findings in the world of sport. People will always ask "why?" and attribution theory may be able to provide the answers and explanations.

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